



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Seminis Vegetable Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Wolverine'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this nineteenth day of April, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)

Seminis Vegetable Seeds, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

PSR 5084

3. VARIETY NAME

Wolverine

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)

~~37437 State Hwy 16~~ 2700 Camino del Sol
~~Woodland CA 95695~~ Oxnard, CA 93030-7967

6. TELEPHONE (include area code)

(530) 666-0931

6. FAX (include area code)

(530) 666-6791

FOR OFFICIAL USE ONLY

PVPO NUMBER

20000007517

DATE

Dec. 6, 1999

7. GENUS AND SPECIES NAME

Lactuca Sativa L.

8. FAMILY NAME (Botanical)

Asteraceae

9. CROP KIND NAME (Common name)

Lettuce

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)

Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

California

12. DATE OF INCORPORATION

1962

FILING AND EXAMINATION FEE:

\$ 2450.00

DATE

Dec. 6, 1999

CERTIFICATION FEE:

\$ 432.00

DATE

3/31/2005

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)

Sharen Chaffin
Seminis Vegetable Seeds, Inc.
37437 State Hwy 16
Woodland CA 95616

Marcel Bruins
Seminis Vegetable Seeds, Inc.
Nude 54D
6702 DN Wageningen
The Netherlands
mbruins@svseeds.nl
Ph: 31 317 450218 Fax: 31 317 450217

14. TELEPHONE (include area code)

01131317450218

15. FAX (include area code)

01131317450217

c. ☒ Exhibit C. Objective Description of the Varietyd. ☐ Exhibit D. Additional Description of the Variety (Optional)e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownershipf. ☒ Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository)g. ☐ Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)

☒ YES (If "yes," answer items 18 and 19 below)☒ NO (If "no," go to item 20)

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☐ YES☒ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

☐ FOUNDATION☐ REGISTERED☐ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKED IN THE U.S. OR OTHER COUNTRIES?

☒ YES (If "yes," give names of countries and dates)☐ NO

USA

Sept 1999

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s))

NAME (Please print or type)

CAPACITY OR TITLE

Director

DATE

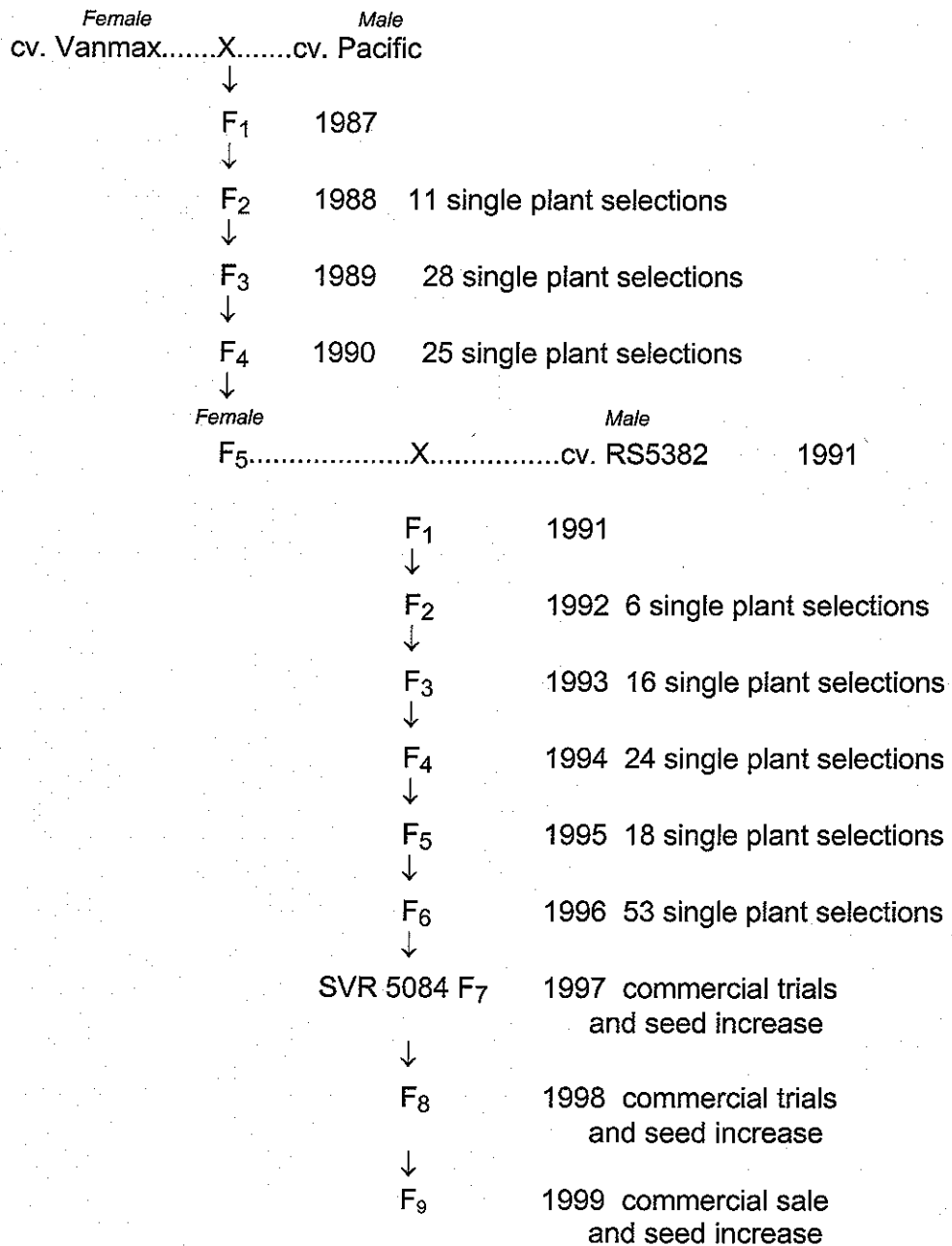
12-3-99

SIGNATURE OF APPLICANT (Owner(s))

NAME (Please print or type)

CAPACITY OR TITLE

DATE

Exhibit 16A. Origin and Breeding History of Lettuce cv. Wolverine (SVR 5084)**Pedigree of cv. Wolverine**

Wolverine (SVR 5084) originated in 1987 with the cross cv. Vanmax by cv. Pacific. Single plant selections were made in subsequent years in the areas of intended commercialization. An F₅ selection of this cross was then crossed in 1991 to RS 5382. By F₇ a group of 12 families was judged uniform and bulked for trialing and seed increase. An F₈ mass was trialed during 1987 and an increase of F₉ seed was produced in the San Joaquin Valley of California the same year.

Exhibit 16A (cont.) Lettuce cv. Wolverine (SVR 5084)

The initial breeding work (up to the final F₄) was carried out at the former Royal Sluis Company's Research Station at San Juan Bautista, California by Mr. Dean Gregg and Mr. Keith Trammell. When Royal Sluis Company was purchased by Petoseed Company in October 1994, further breeding and trialing was carried out by Dr. William Waycott at the Petoseed Company's Research Station at Arroyo Grande, California. Petoseed Company was purchased by Seminis Vegetable Seeds, Inc. in 1995 and this breeding work continued at the Arroyo Grande location until the present. Field trials were conducted in production areas throughout the Desert Southwest of North America during 1997 and 1998.

The breeding method employed was pedigree selection, using both single plant selection and mass selection practices. The selection criterion for Wolverine was to breed a cultivar with increase uniformity and improved heading ability when compared to the most similar varieties.

In trials of cv. Wolverine during the **last seven years covering generations F₇ to F₁₄**, we have seen neither genetic variants nor off-types in over 25,000 plants, **indicating that this variety is genetically uniform and stable.** During abnormally cold weather, such as what was experienced during the winter of 1998 - 1999, in some instances plants of Wolverine exhibited a phenomenon called spiraled head formation, where instead of forming a spherical head, some plant heads were elliptical or cylindrical in shape with the upper end somewhat pointed. The phenomenon is rare and was noted in some other varieties grown during the same period.

Exhibit 16B. Novelty Statement of Lettuce cv. Wolverine (SVR 5084)

Cv Wolverine is described as a vigorous crisphead lettuce cultivar adapted to the Desert Southwest area of North America. Its optimum sowing period is throughout November in Western Arizona and Southern California, and in late November/early December in the San Joaquin Valley of California. Cv. Wolverine has downy mildew resistance to California Pathotype III. Cv. Wolverine was selected for improved uniformity and performance compared to the currently commercial cultivars grown during these production periods..

Phenotypically, cv. Wolverine is distinct from its most similar commercial cultivar cv. Red Coach 74 (**Table 1**). Cv. Wolverine is slightly smaller than cv. Red Coach 74 (**17.08cm vs. 17.98cm**), slightly darker in color, and more uniform. In replicated field trials, cv Wolverine consistently exhibited more plants with round, firm heads, while cv Red Coach 74 exhibited less uniformity of heading, with several plants having soft or puffy heads.

Cv. Wolverine is distinguishable from cv. Jackal, the other cultivar with the same sowing dates submitted by Seminis Vegetable Seeds, Inc. for PVP. Cv. Wolverine is slightly larger than cv Jackal (**17.08cm vs. 16.05cm**), darker green, has a smoother leaf surface, i.e. less undulation and savoy (blistering), and is susceptible to lettuce mosaic virus(**suscept. vs. resistant**).

The data presented here are statistically different at the 95% confidence level, exhibiting a range of means for plant diameter from 45.99 to 46.56 for cv. Wolverine and from 49.90 to 50.70 for cv. Red Coach 74, of means for head diameter from 16.92 to 17.23 for cv. Wolverine and from 17.72 to 18.23 for cv. Red Coach 74, and of means for head weight from 808.79 to 810.71 for cv. Wolverine and from 850.16 to 852.34 for cv. Red Coach 74, using the 0.95 probability of generating confidence intervals (CI) that contains the means.

Table 1. Evaluation of Wolverine (SVR 5084) and Jackal (SVR 0874) and the most similar cultivar, Red Coach 74, for several important characters.

Trial No	Cultivar	Rep No.	Color ^a	Downy Mildew Resist. ^b	Lettuce Mosaic Resist. ^c	Plant Diam. ^d	Head Diamtr ^e	Head Weight ^f	No. of Days to 15 cm ^g
Trial 1: Evaluated: 2 Mar 99 Yuma, AZ	Wolverine: Rep. 2	Rep. 1	146A	III	Suscept.	45.9±1.3	17.8±0.7	811±4.0	68
		Rep. 2	146A	III	Suscept.	46.8±1.1	16.4±0.6	813±4.5	70
		Average:	146A	III	Suscept.	46.4±1.2	17.1±0.7	812±4.3	69
	Jackal:	Rep. 1	146A	III	Resist.	46.0±1.6	15.9±0.7	713±4.1	64
		Rep. 2	146A	III	Resist.	46.8±1.2	15.6±0.8	700±4.6	63
Red Coach 74:	Average:	146A	III	Resist.	46.4±1.4	15.8±0.8	707±4.4	64	
		Rep. 1	146A	III	Suscept.	50.9±2.1	17.7±1.6	847±4.8	62
		Rep. 2	146A	III	Suscept.	49.8±1.3	18.6±0.8	853±5.0	63
	Average:	146A	III	Suscept.	50.4±1.7	18.2±1.2	850±4.9	63	
	Wolverine:	Rep. 1	146A	III	Suscept.	45.7±1.2	16.9±0.8	809±4.1	69
Rep. 2			146A	III	Suscept.	46.7±1.5	17.2±0.7	806±4.6	68
Average:			146A	III	Suscept.	46.2±1.4	17.1±0.8	808±4.4	69
Jackal:		Rep. 1	146A	III	Resist.	45.8±1.0	16.1±0.7	710±4.0	63
		Rep. 2	146A	III	Resist.	45.9±1.3	16.6±0.8	702±3.9	65
Red Coach 74:	Average:	146A	III	Resist.	45.9±1.2	16.4±0.8	706±4.0	64	
		Rep. 1	146A	III	Suscept.	50.6±1.6	17.4±0.6	851±5.0	62
		Rep. 2	146A	III	Suscept.	49.9±2.1	18.2±1.5	854±4.7	64
	Average:	146A	III	Suscept.	50.3±1.9	17.8±1.1r	853±4.9	63	
	cv. Wolverine cv. Jackal cv. Red Coach 74	Average:	146A	III	Suscept.	45.99 to 46.56	16.92 to 17.23	808.79 to 810.71	
Rep. 1			146A	III	Suscept.	45.84 to 46.41	15.95 to 16.15	701.88 to 710.62	
Rep. 2			146A	III	Suscept.	49.90 to 50.70	17.72 to 18.23	850.16 to 852.34	

Range of variation among means of statistically significant differences at the 95% level using the confidence interval [CI] = mean ± (SD)

Range of variation among means of statistically significant differences at the 95% level using the confidence interval [CI = mean ± (SDXSE)]:

- ^a Color evaluation was done using the Royal Horticultural Society color chart, U.K.
^b Downy mildew survey reported as resistance to California Pathotypes I through V, using two replications each having 15 seedlings, grown in laboratory screens.
^c Lettuce mosaic virus survey using two replications each having 40 seedlings, grown in laboratory screens.
^d Mean plant diameter using two sowing dates of 20 plants per replication in cm ± standard deviation.
^e Mean head diameter using two sowing dates of 20 plants per replication in cm ± standard deviation.

200000075

^f Mean head weight using two sowing dates of 20 plants per replication in grams \pm standard deviation.
^g Mean number of days until stem reaches 15 cm using two replications of 20 plants each.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION
OBJECTIVE DESCRIPTION OF VARIETY
LETTUCE *Lactuca sativa*

EXHIBIT

NAME OF APPLICANT (S) Seminis Vegetable Seeds, Inc. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 37437 State Hwy 16 Woodland CA 95695	FOR OFFICIAL USE ONLY PVFO NUMBER 200000075 VARIETY NAME WOLVERINE EXPERIMENTAL DESIGNATION PSR 5084
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Place numbers in the boxes for the characters which best describe this variety. Measured data should be the mean of an appropriate number (at least 10) of well spaced plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The location of the test area is:

Color System Used:

1. PLANT TYPE: (See list of suggested check varieties page 4.)

☐ 0 ☒ 6

01=Cutting/Leaf
02=Butterhead
03=Bibb
04=Cos or Romaine

05=Great Lakes Group
06=Vanguard Group
07=Imperial Group
08=Eastern (Ithaca) Group

09=Stem
10=Latin
11=OTHER

2. SEED:

☒ 2

COLOR
1=White (Silver Gray)
2=Black (Gray Brown)
3=Brown (Amber)

☒ 2

LIGHT DORMANCY
1=Light Required
2=Light Not Required

☐ 1

HEAT DORMANCY
1=Susceptible
2=Not Susceptible

3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day old seedling grown under optimal conditions.

☒ 2

SHAPE OF COTYLEDONS:

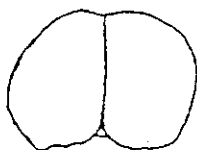
1=Broad

2=Intermediate

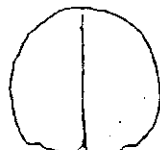
3=Spatulate

☒ 4

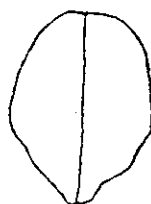
SHAPE OF FOURTH LEAF:



1



2



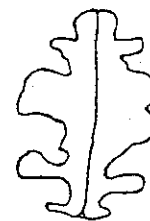
3



4



5



6

☐ 1 ☒ 9

LENGTH/WIDTH INDEX OF FOURTH LEAF: LW x 10

☐ 1

APICAL MARGIN:

1=Entire

4=Moderately Dentate

7=Lobed

☒ 2

BASAL MARGIN:

2=Crenate/Gnawed
3=Finely Dentate

5=Coarsely Dentate
6=Incised

8=OTHER (specify)

☒ 2

UNDULATION:

1=Flat

2=Slight

3=Medium

4=Marked

☒ 3

GREEN COLOR:

1=Yellow Green
2=Light Green

3=Medium Green
4=Dark Green

5=Blue Green
6=Silver Green

7=Gray Green

ANTHOCYANIN:

☐ 1

DISTRIBUTION:

1=Absent
2=Margin Only

3=Spotted
4=Throughout

5=OTHER (specify)

☐ -

CONCENTRATION:

1=Light

2=Moderate

3=Intense

☐ 1

ROLLING:

1=Absent

2=Present

☐ 1

CUPPING:

1=Uncupped

2=Slight

3=Markedly

☐ 1

REFLEXING:

1=None

2=Apical Margin

3=Lateral Margins

7

4. MATURE LEAVES (observe harvest-mature outer leaves):

200000075

NOTE: Provide color photo of harvest-mature leaves which accurately shows color and margin characteristics.

MARGIN:

<input type="checkbox"/> 2	INCISION DEPTH: (deepest penetration of the margin)	1=Absent/Shallow (Dark Green Boston)	2=Moderate (Vanguard)	3=Deep (Great Lakes 659)
<input type="checkbox"/> 4	INDENTATION: (finest divisions of the margin)	1=Entire (Dark Green Boston)	3=Deeply Dentate (Great Lakes 659)	5=OTHER (specify)
<input type="checkbox"/> 2	UNDULATION OF THE APICAL MARGIN:	2=Shallowly Dentate (Great Lakes 65)	4=Crenate (Vanguard)	
<input type="checkbox"/> 2		1=Absent/Slight (Dark Green Boston)	2=Moderate (Vanguard)	3=Strong (Great Lakes 659)
<input type="checkbox"/> 4	GREEN COLOR:	1=Very Light Green (Bibb)	3=Medium Green (Great Lakes)	5=Very Dark Green
		2=Light Green (Minetto)	4=Dark Green (Vanguard)	6=OTHER
ANTHOCYANIN (grown at or below 10 C):				
<input type="checkbox"/> 1	DISTRIBUTION:	1=Absent	3=Spotted (Calif. Cream Butter)	5=OTHER (specify)
		2=Margin Only (Big Boston)	4=Throughout (Prize Head)	
<input type="checkbox"/> -	CONCENTRATION:	1=Light (Iceberg)	2=Moderate (Prize Head)	3=Intense (Ruby)
<input type="checkbox"/> 3	SIZE:	1=Small	2=Medium	3=Large
<input type="checkbox"/> 1	GLOSSINESS:	1=Dull (Vanguard)	2=Moderate (Salinas)	3=Glossy (Great Lakes)
<input type="checkbox"/> 2	BLISTERING:	1=Absent/Slight (Salinas)	2=Moderate (Vanguard)	3=Strong (Prize Head)
<input type="checkbox"/> 2	LEAF THICKNESS:	1=Thin	2=Intermediate	3=Thick
<input type="checkbox"/> 1	TRICHOMES:	1=Absent (smooth)	2=Present (spiny)	

5. PLANT (at market stage. Choose a comparison variety appropriate for this type.):

<input type="checkbox"/> 46	SPREAD OF FRAME LEAVES:	cm This Variety	<input type="checkbox"/> 50 cm RED COACH 74 (specify comparison variety)
<input type="checkbox"/> 17	HEAD DIAMETER (market trimmed with single cap leaf):	cm This Variety	<input type="checkbox"/> 18 cm RED COACH 74 (specify comparison variety)
<input type="checkbox"/> 3	HEAD SHAPE:	1=Flattened 2=Slightly Flattened	3=Spherical 4=Elongate 5=Non-Heading 6=OTHER
<input type="checkbox"/> 3	HEAD SIZE CLASS:	1=Small	2=Medium 3=Large
<input type="checkbox"/> 24	HEAD COUNT PER CARTON		
<input type="checkbox"/> 810	HEAD WEIGHT:	g This Variety	<input type="checkbox"/> 852 g RED COACH 74 (specify comparison variety)
<input type="checkbox"/> 4	HEAD FIRMNESS:	1=Loose 2=Moderate	3=Firm 4=Very Firm

6. BUTT (bottom of market-trimmed head):

<input type="checkbox"/> 3	SHAPE:	1=Slightly Concave	2=Flat	3=Rounded
<input type="checkbox"/> 1	MIDRIB:	1=Flattened (Salinas)	2=Moderately Raised	3=Prominently Raised (Great Lakes 659)

7. CORE (stem of market-trimmed head):

<input type="checkbox"/> 38	mm Diameter at base of head
<input type="checkbox"/> 45	Ratio of head diameter/core diameter
<input type="checkbox"/> 36	Core height from base of head to apex:
	mm This Variety <input type="checkbox"/> 35 mm RED COACH 74 (specify comparison variety)

8. BOLTING (Give First Water Date 19 MAY 98):

NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

<input type="checkbox"/> 57	Number of days from First Water Date to seed stalk emergence (summer conditions):
	This Variety <input type="checkbox"/> 63 RED COACH 74 (specify comparison variety)
<input type="checkbox"/> 3	BOLTING CLASS:
	1=Very Slow 2=Slow 3=Medium 4=Rapid 5=Very Rapid
<input type="checkbox"/> 108	Height of mature seed stalk:
	cm This Variety <input type="checkbox"/> 122 cm RED COACH 74 (specify comparison variety)

Spread of Bolter Plant (at widest point):
 cm This Variety 58 cm RED COACH 74 (specify comparison variety)

- ☒ 1 BOLTER LEAVES: 1=Straight 2=Curved
- ☒ 2 MARGIN: 1=Entire 2=Dentate
- ☒ 3 COLOR: 1=Light Green 2=Medium Green 3=Dark Green

- BOLTER HABIT:
- ☒ 1 TERMINAL INFLORESCENCE: 1=Absent 2=Present
- ☒ 2 LATERAL SHOOTS: (above head) 1=Absent 2=Present
- ☒ 1 BASAL SIDE SHOOTS: 1=Absent 2=Present

9. MATURITY (earliness of harvest-mature head formation):

NOTE: Complete this section for at least one season.

SEASON	Applic. 1/ # of days	Check 1/ # of days	CHECK VARIETY 2/
Spring	<u>114</u>	<u>117</u>	<u>RED COACH 74</u>
Summer			
Fall			
Winter			

Give planting date(s), and location(s):

Spring SOUTHERN CALIFORNIA, WESTERN ARIZONA, 25 OCTOBER TO 1 DECEMBER
CENTRAL CALIFORNIA (SAN JOAQUIN VALLEY), 1 TO 25 DECEMBER

Summer

Fall

Winter

1/ First water date to harvest.

2/ Fill in check variety name on the appropriate line.

10. ADAPTATION:

PRIMARY REGIONS OF ADAPTION (tested and proven adapted):

(0=Not tested

1=Not Adapted

2=Adapted)

- ☒ 2 Southwest (Calif., Ariz. desert) ☐ 0 West Coast ☐ 0 Northeast
- ☐ 0 Northcentral ☐ 0 Southeast ☐ 0 OTHER

SEASON:

- ☒ 2 Spring (area YUMA, IMPERIAL VALLEY
SAN JOAQUIN VALLEY)
- ☐ 0 Summer (area _____)

☐ 0 Fall (area _____)

☐ 0 Winter (area _____)

- ☐ 0 GREENHOUSE: 0=Not tested 1=Not Adapted 2=Adapted
- ☒ 1 SOIL TYPE: 1=Mineral 2=Organic 3=Both

11. DISEASES AND STRESS REACTIONS (0=Not tested; 1=Susceptible; 2=Intermediate; 3=Resistant; 4=Highly resistant; 5=Tolerant):

VIRUS

- ☒ 1 Big Vein
☐ 0 Lettuce Mosaic
☐ 0 Cucumber Mosaic
☐ 0 Broad Bean Wilt
☐ 0 Turnip Mosaic
☐ 0 Beet Western Yellows
☐ 0 Lett. Infectious Yellows
☐ Other Virus _____

FUNGAL/BACTERIAL

- ☐ 0 Corky Root Rot (Pythium Root Rot)
☒ 3 Downy Mildew (Races CA III)
☐ 0 Powdery Mildew
☐ 0 Sclerotinia Rot
☐ 0 Bacterial Soft Rot (Pseudomonas spp. & others)
☐ 0 Botrytis (Gray Mold)
☐ OTHER _____

INSECTS

- ☐ 0 Cabbage Loopers
☐ 0 Root Aphids
☐ 0 Green Peach Aphid
☐ Other Insect _____

PHYSIOLOGICAL/STRESS

- ☒ 2 Tipburn
☐ 0 Salt
☒ 2 Heat
☐ 0 Brown Rib (Rib Discoloration, Rib Blight)
☐ 0 Drought
☐ OTHER _____
☒ 3 Cold

POST HARVEST

- ☐ 0 Pink Rib
☐ 0 Russet Spotting
☐ 0 Rusty Brown Discoloration
☐ 0 Internal Rib Necrosis (Blackheart, Gray Rib, Gray Streak)
☐ 0 Brown Stain

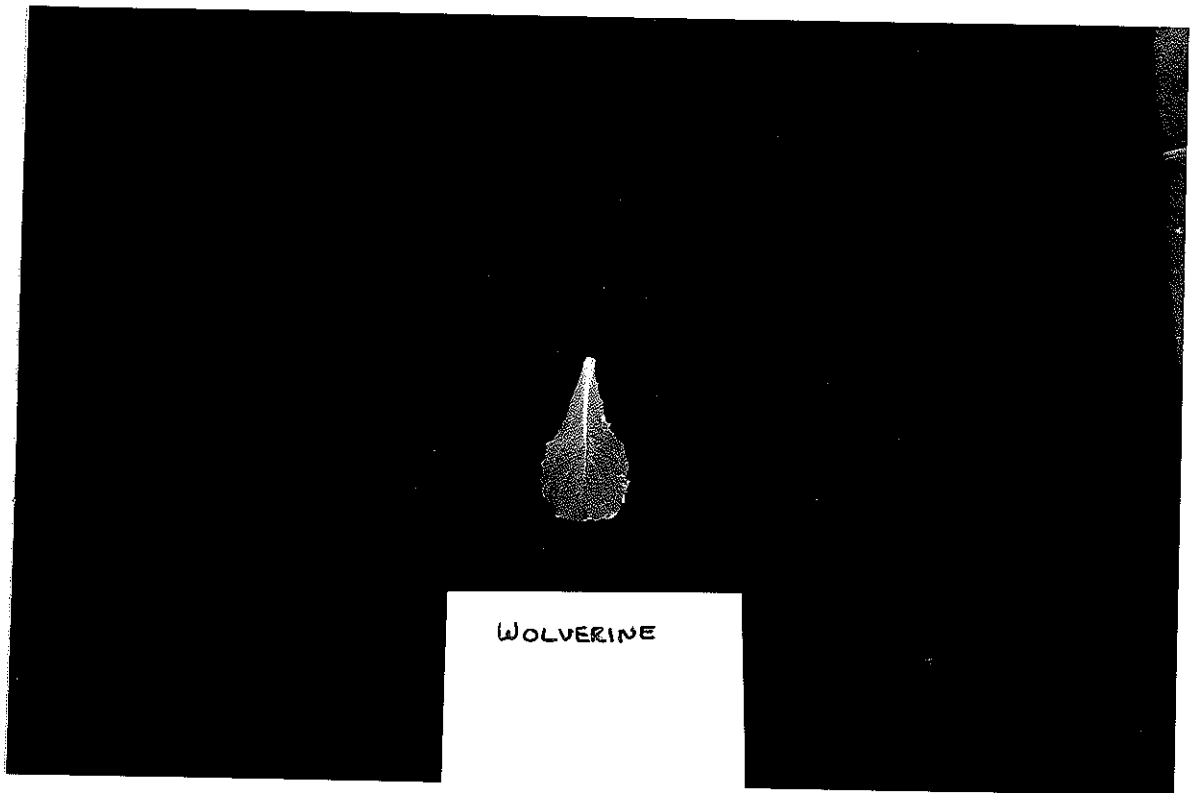
12. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

13. COMMENTS:

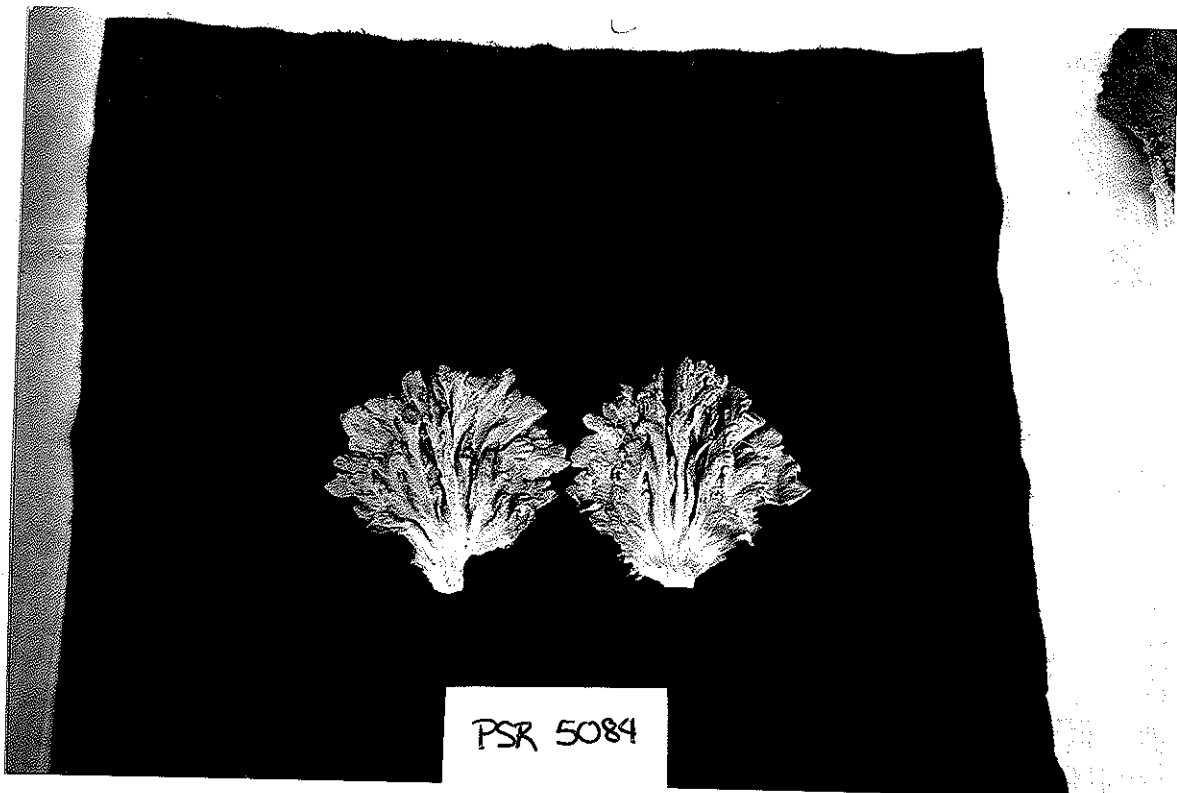
SUGGESTED CHECK VARIETIES

- TYPE
 1) CUTTING/LEAF
 2) BUTTERHEAD
 3) BIBB
 4) COS, OR ROMAINE
 5) GREAT LAKES GROUP
 6) VANGUARD GROUP
 7) IMPERIAL GROUP
 8) EASTERN GROUP
 9) STEM
 10) LATIN

- CHECK VARIETY
 SALAD BOWL
 DARK GREEN BOSTON
 BIBB
 PARRIS ISLAND
 GREAT LAKES 659-700
 VANGUARD
 VIVA
 ITHACA
 CELTUCE
 MATCHLESS



Fourth Leaf from 20-Day old Seedlings, Wolverine (PSR 5084)



Harvest-Mature Leaf, Wolverine (PSR 5084)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)

Seminis Vegetable Seeds, Inc.

2. TEMPORARY DESIGNATION
OR EXPERIMENTAL NUMBER

PSR 5084

3. VARIETY NAME

Wolverine

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)

37437 State Hwy 16
Woodland CA 95695

5. TELEPHONE (include area code)

6. FAX (include area code)

7. PVPO NUMBER

20000007511

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain.

☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?

If no, give name of country

☒ YES ☐ NO

10. Is the applicant the original breeder? If no, please answer the following:

a. If original rights to variety were owned by individual(s):

Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country

☒ YES ☐ NO

b. If original rights to variety were owned by a company:

Is the original breeder(s) U.S. based company? If no, give name of country

☐ YES ☐ NO

11. Additional explanation on ownership (If needed, use reverse for extra space):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. (See Section 41(a)(2) of the Plant Variety Protection Act for definition.)

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